

PCE in drinking water linked to an increased risk of mental illness

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The solvent tetrachloroethylene (PCE) widely used in industry and to dry clean clothes is a [neurotoxin](#) known to cause mood changes, anxiety, and depression in people who work with it. To date the long-term effect of this chemical on children exposed to PCE has been less clear, although there is some evidence that children of people who work in the dry cleaning industry have an increased risk of schizophrenia. New research published in BioMed Central's open access journal *Environmental Health* found that exposure to PCE as a child was associated with an increased risk of bipolar disorder and [post traumatic stress disorder](#) (PTSD).

From 1968, until the early 1980s, water companies in Massachusetts installed vinyl-lined (VL/AC) [water pipes](#) that were subsequently found to be leaching PCE into the [drinking water](#) supply. Researchers from Boston University followed the incidence of mental illness amongst adults from Cape Cod, born between 1969 and 1983, who were consequently exposed to PCE both before birth and during early childhood.

While there was no increase seen in the incidence of depression, regardless of PCE exposure, people with prenatal and early childhood exposure to PCE had almost twice the risk of bipolar disorder, compared to an unexposed group, and their risk of PTSD was raised by 50%.

Dr Ann Aschengrau from Boston University School of Public Health

warned, "It is impossible to calculate the exact amount of PCE these people were exposed to - levels of PCE were recorded as high as 1,550 times the currently recommended safe limit. While the water companies flushed the pipes to address this problem, people are still being exposed to PCE in the dry cleaning and textile industries, and from consumer products, and so the potential for an [increased risk](#) of illness remains real."

More information: Occurrence of mental illness following prenatal and early childhood exposure to tetrachloroethylene (PCE)-contaminated drinking water: a retrospective cohort study. Ann Aschengrau, Janice M Weinberg, Patricia A Janulewicz, Megan E Romano, Lisa G Gallagher, Michael R Winter, Brett R Martin, Veronica M Vieira, Thomas F Webster, Roberta F White and David M Ozonoff *Environmental Health* (in press)

Provided by BioMed Central

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